

WHAT IS CLAIMED IS:

1. A printer controller comprising:

an evaluating unit that detects a specific data sequence in a send data stream sent to a printer;

5 a generating unit, responsive to the evaluating unit detecting the specific data sequence in the send data stream, that divides the send data stream into a plurality of data stream segments not containing the specific data sequence, the plurality of data stream segments functioning the same as the send data stream; and

10 a sending unit, responsive to the evaluating unit, that sends one of the send data stream and the plurality of data stream segments to the printer based on the detection result of the evaluating unit.

2. The printer controller as in claim 1, wherein:

the send data stream and each of the plurality of data stream segments have 15 a header and a parameter block; and

the generating unit generates a header for each of the plurality of data stream segments that is the same as the header of the send data stream.

3. The printer controller as in claim 2, wherein:

the generating unit generates a parameter block for each data stream 20 segment according to the number of segments generated from the send data stream.

4. The printer controller as in claim 1, wherein:

the specific data sequence is a data sequence of a real-time command of a printer.

5. A printer controller that transmits a send data stream to a printer, the send 25 data stream including a print data sequence arranged in a matrix and having

length parameters indicating the length in a row direction and the length in a column direction of the matrix, said printer controller comprising:

an evaluating unit that detects a specific data sequence in the print data sequence;

5 a determination unit, responsive to a detection result of the evaluating unit, that determines the position at which said specific data sequence is located if said specific data sequence is included in said print data sequence;

10 a division unit, responsive to a determination result of said determination unit, that inserts dummy data into the print data sequence and divides said print data sequence into a plurality of divided print data sequences;

15 a conversion unit, responsive to a determination result of said determination unit, that produces length parameters representing the lengths of respective divided print data sequences from the length parameters of the send data stream; and

20 15 a transmission unit, responsive to the evaluating unit, that transmits one of the send data stream and a plurality of data stream segments to the printer, the plurality of data stream segments including the divided print data sequences produced by said division unit and respective length parameters produced by said conversion unit.

25 6. The printer controller as in claim 5, wherein said division unit divides said print data sequence into a plurality of divided print data sequences without inserting dummy data into said print data sequence when said determination unit determines the specific data sequence is located starting from a position corresponding to the bottom row of the matrix.

25 7. The printer controller as in claim 5, wherein said division unit determines the length of dummy data to be inserted in accordance with the length parameters of said send data stream.

8. The printer controller as in claim 5, further comprising:

a print start position specifying unit that produces data specifying the print start positions of respective divided print data sequences produced by said division unit, and

wherein said transmission unit transmits to said printer said print start 5 positions specifying data produced by said print start position specifying unit with the plurality of data stream segments.

9. The printer controller as in claim 5, wherein the column direction of said matrix is substantially the same as the printing medium feeding direction of said printer.

10 10. The printer controller as in claim 5, wherein:

the specific data sequence is a data sequence of a real-time command of a printer.

11. A printer control method comprising:

(a) detecting a specific data sequence in a send data stream sent to a printer;

(b) responsive to detection of the specific data sequence in the send data stream in step (a), dividing the send data stream into a plurality of data stream segments not containing the specific data sequence, the plurality of data stream segments functioning the same as the send data stream; and

20 (c) sending one of the send data stream and the plurality of data stream segments to the printer based on the detection result of step (a).

12. The printer control method as in claim 11, wherein:

the send data stream and each of the data stream segments have a header and a parameter block; and

25 step (b) comprises generating a header for each of the plurality of data stream segments that is the same as the header of the send data stream.

13. The printer control method as in claim 12, wherein:

step (b) generates a parameter block for each data stream segment according to the number of segments generated from the send data stream.

14. The control method as in claim 11, wherein:

5 the specific data sequence is a data sequence of a real-time command of a printer.

15. A control method for a printer controller that transmits a send data stream to a printer, the send data stream including a print data sequence arranged in a matrix and having length parameters indicating the length in a row direction and

10 the length in a column direction of the matrix, said control method comprising:

(a) detecting a specific data sequence in said print data sequence;

15 (b) responsive to detection of the specific data sequence in the send data stream in step (a), determining the position at which said specific data sequence is located;

(c) inserting dummy data into the print data sequence in accordance with a determination result of step (b), and dividing the print data sequence into a plurality of divided print data sequences;

20 (d) producing length parameters representing the lengths of respective divided print data sequences from the length parameters of the send data stream in accordance with the determination result of step (b); and

(e) transmitting one of the send data stream and a plurality of data stream segments to the printer, the plurality of data stream segments including the divided print data sequences produced in step (c) and respective length parameters produced in step (d).

25 16. The control method as in claim 15, wherein the step (c) comprises dividing the print data sequence into a plurality of divided print data sequences without inserting dummy data into the print data sequence when the specific data sequence is located starting from a position corresponding to the bottom row of the matrix.

17. The control method as in claim 15, wherein step (c) comprises determining the length of dummy data to be inserted in accordance with the length parameters of the send data stream.

18. The control method as in claim 15, further comprising:

5 (f) producing data that specifies print start positions of the divided print data sequences produced by step (c), and

wherein step (e) transmits to a printer the print start position specifying data produced by step (f) with said plurality of data stream segments.

19. The control method as in claim 15, wherein a column direction of the matrix
10 is substantially the same as a printing medium feeding direction of a printer.

20. The control method as in claims 15, wherein:

the specific data sequence is a data sequence of a real-time command of a printer.

21. A machine-readable data storage medium storing a program of instructions
15 executable by said machine to perform a method of controlling a printer controller, said control method comprising:

(a) detecting a specific data sequence in a send data stream sent to a printer;

20 (b) responsive to detection of the specific data sequence in the send data stream in step (a), dividing the send data stream into a plurality of data stream segments not containing the specific data sequence, the plurality of data stream segments functioning the same as the send data stream; and

(c) sending one of the send data stream and the plurality of data stream segments to the printer based on the detection result of step (a).

25 22. The data storage medium as in claim 21, wherein:

the send data stream and each of the data stream segments have a header and a parameter block; and

step (b) comprises generating a header for each of the plurality of data stream segments that is the same as the header of the send data stream.

5 23. The data storage medium as in claim 22, in which:

step (b) generates a parameter block for each data stream segment according to the number of segments generated from the send data stream.

24. The data storage medium as in claim 21, wherein:

the specific data sequence is a data sequence of a real-time command of a printer.

10 25. The data storage medium as in claim 21, wherein:

the data storage medium comprises one of a compact disc, floppy disc, hard disk, magneto-optical disk, digital video disk, magnetic tape, and semiconductor memory.

15 26. A machine-readable data storage medium storing a program of instructions executable by the machine to perform a method of controlling a printer controller that transmits a send data stream to a printer, the send data stream including a print data sequence arranged in a matrix and having length parameters indicating the length in a row direction and the length in a column direction of the matrix, the
20 control method comprising:

(a) detecting a specific data sequence in said print data sequence;

(b) responsive to detection of the specific data sequence in the send data stream in step (a), determining the position at which said specific data sequence is located;

25 (c) inserting dummy data into the print data sequence in accordance with a determination result of step (b), and dividing the print data sequence into a plurality of divided print data sequences;

(d) producing length parameters representing the lengths of respective divided print data sequences from the length parameters of the send data stream in accordance with the determination result of step (b); and

5 (e) transmitting one of the send data stream and a plurality of data stream segments to the printer, the plurality of data stream segments including the divided print data sequences produced in step (c) and respective length parameters produced in step (d).

27. The data storage medium as in claim 26, wherein the step (c) comprises dividing the print data sequence into a plurality of divided print data sequences
10 without inserting dummy data into the print data sequence when the specific data sequence is located starting from a position corresponding to the bottom row of the matrix.

28. The data storage medium as in claim 26, wherein the step (c) determines the length of dummy data to be inserted in accordance with the length parameters of
15 said send data stream.

29. The data storage medium as in claim 26, further comprising:

(f) producing data that specifies the print start positions of the divided print data sequences produced in step (c), and

20 wherein step (e) transmits to a printer the print start positions specifying data produced by step (f) with said plurality of data stream segments.

30. The data storage medium as in claim 26, wherein a column direction of the matrix is substantially the same as a printing medium feeding direction of a printer.

31. The data storage medium as in claim 26, wherein:

25 the specific data sequence is a data sequence of a real-time command of a printer.

32. The data storage medium as in claims 26, wherein:

the data storage medium is one of a compact disc, floppy disc, hard disk, magneto-optical disk, digital video disk, magnetic tape, and semiconductor memory.

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